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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/221,291

12/23/1998

MARTIN H. GRAHAM

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06/17/2002

Edwin H. Taylor
Blakely, Sokoloff, Taylor, & Zafman LLP
12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025

EXAMINER

BURD, KEVIN MICHAEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/221,291

Applicant(s)
GRAHAM

Examiner
Kevin M. Burd

Art Unit
2631



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 15, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-18 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Apr 15, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 10 6) ☐ Other:

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DETAILED ACTION

1. This office action, in response to the amendment filed 4/15/2002, is a final office action.

Response to Arguments

2. The objections to the claims have been withdrawn.
3. The objection to the drawings is withdrawn.
4. Applicant's arguments filed 4/15/2002 have been fully considered but they are not persuasive.

Regarding claim 1, the amended claim now reads "sending a first biphasic pulse at a first time instance; and sending a second biphasic pulse at a second time instance after a time interval, wherein said first biphasic pulse and the second biphasic pulse are different types, wherein the time interval between said first time instance and said second time instance represents at least a first set of the data bits". Miwa discloses transmitting a "1" pulse, at a first time instance, for a period of t seconds. After t seconds a "0" pulse is sent for a period of t to $4t$ seconds. At a second time instance a new "1" pulse is sent. This second time instance will occur $2t$ to $5t$ seconds after the first time instance. The time interval between these two time instances will represent the 2-bit data shown in figure 2.

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Applicant states the references do not disclose alternating between odd and even biphasic pulses in the transmission. Figure 1(a) shows alternating between odd and even pulses and where the biphasic pulses are different as compared to its immediately neighboring biphasic pulses. Figure 1 shows pulse "10" is followed by pulse "11". These pulses alternate between even and odd pulses. Figure 1(a) also shows, in the ID code (8 bits) portion of the transmission, that the biphasic pulses are different than their adjacent pulses.

For these reasons, the previous rejections are maintained.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 8, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Miwa (US 5,640,160).

Regarding claims 1 and 8, Miwa discloses a method of transmitting pulses comprising a "1" (positive) pulse and a "0" (negative) pulse as shown in figures 1a-1e and figure 2. A "1" pulse is sent at a first time instance for t seconds and a zero pulse is sent for an additional multiple of t seconds. These combined pulses make up a first

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biphasic pulse. Immediately after the zero pulse is finished being sent, a second biphasic pulse will be sent at that time instance. The time interval between the first time instance and the second time instance will represent a set of data bits as shown in figure 2. The types of "biphasic" pulses, the combined "1" and "0" pulse, are different as shown in figure 2.

Regarding claim 14, all of the discloses pulses have an amplitude and a pulse width as shown in figure 2.

Regarding claim 16, as discussed above, figure 2 shows the pulse width of the "biphasic" pulse representing a set of data.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (US 5,640,160).

Regarding claims 7 and 17, Miwa discloses transmitting the pulse position data as discussed above in an IR module or radio controlled transceiver. Miwa does not disclose transmitting this data over a telephone wire. However, it would have been

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obvious for one of ordinary skill in the art at the time of the invention to transmit the data over any type of transmission medium capable of receiving this digital data including telephone wiring to allow this data to be received by its desired destination.

9. Claims 2-4, 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (US 5,640,160) in view of Gonsewski et al (US 3,863,025).

Regarding claim 2, Miwa discloses transmitting the pulse position data as discussed above. Miwa does not disclose the types of "biphasic" pulses are connected by different sequences of positive and negative pulses. Gonsewski discloses "biphasic" pulses are connected by different sequences of positive and negative pulses on figure 3. These pulses allow additional information to be transmitted as shown in the figure. It would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the data transmission shown in figure 3 of Gonsewski into the data transmission method of Miwa to allow more information to be transmitted in the previous amount of time.

Regarding claims 3 and 18, Miwa discloses transmitting the pulse position data as discussed above. Miwa does not disclose transmitting the pulses do not carry any dc component. Gonsewski shows, in figure 3, the bipolar signaling. The dc component is removed and cancels the base line wander (column 1, lines 36-50). The bipolar signals can also be used to send additional data as shown in figure 3. For these reasons, it

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would have been obvious for one of ordinary skill in the art at the time of the invention to combine the data transmission of Gonsewski into the pulse modulation data transmission method of Miwa.

Regarding claim 4, all of the discloses pulses have an amplitude and a pulse width as shown in figure 2 of Miwa.

Regarding claim 6, as discussed above, figure 2 shows the pulse width of the "biphasic" pulse representing a set of data.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (US 5,640,160) and Rybicki et al (US 6,212,230).

Regarding claim 15, Miwa does not disclose altering the amplitude of the pulses to transmit additional data. However, Rybicki discloses in figures 27 and 28 altering the pulse amplitude to transmit additional data. It would have been obvious for one of ordinary skill in the art at the time of the invention to alter the amplitude to allow additional data to be transmitted over the same period of time.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (US 5,640,160) and Gonsewski et al (US 3,863,025) as applied to claim 4 above, further in view of Rybicki et al (US 6,212,230).

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Regarding claim 5, the combination does not disclose altering the amplitude of the pulses to transmit additional data. However, Rybicki discloses in figures 27 and 28 altering the pulse amplitude to transmit additional data. It would have been obvious for one of ordinary skill in the art at the time of the invention to alter the amplitude to allow additional data to be transmitted over the same period of time.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any response to this final action should be mailed to:

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Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications; please mark
"EXPEDITED PROCEDURE" or for informal or draft
communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Kevin Burd, whose telephone number is (703) 308-
7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM -
5:00 PM. The examiner can also be reached on alternate Friday.

Any inquiry of a general nature or relating to the status of this application should
be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd
PATENT EXAMINER
June 16, 2002



JEAN CORNELIUS
PATENT EXAMINER

6.17.02